REMARKS

Claims 1-10 and 12-20 are pending. Claim 1 has been amended. Claims 16-19 have been withdrawn from consideration. Reconsideration of the application is requested.

Interview Summary

Applicants appreciate Examiner Sellman's participation in a telephonic interview with Applicants' representative, Thomas M. Spielbauer (Reg. No. 58,492), on June 25, 2009. During the interview, Applicants explained how one of ordinary skill in the art would readily understand that there are two known approaches for radiation curing a material in an inert atmosphere. One method involves replacing the oxygen-containing atmosphere to which the material is exposed with an inert atmosphere (e.g., nitrogen). In the other method, the ambient gas environment is not changed; rather an inert environment is created for the material by providing a covering layer (e.g., a plastic film) over the material. Applicants further noted that McCormick (US 5,856,022) describes these two methods as the current state of the art at col. 14, lines 3-10.

Following this discussion it was agreed that Applicants would amend claim 1 to clarify that during step (v), the radiation-curable precursor itself is in a non-inert atmosphere, i.e., the atmosphere is non-inert and the radiation-curable precursor is not covered to create an inert atmosphere. No agreement was reached on the patentability of any claim.

Claim Amendments

Claim 1 has been amended to make clear that the radiation-curable precursor itself is in a non-inert atmosphere while being further polymerized by being subjected to actinic radiation. Support for this amendment can be found in claim 1 as originally filed. Additional support can be found at, e.g., page 22, line 28 – page 23, line 2; page 24, line 13 – page 25, line 32 (describing a two-step process for performing step (v), wherein during the first step the radiation-curable precursor is irradiated in a non-inert atmosphere); and page 26, lines 1-6 (describing a one-step process for performing step (v), wherein the irradiation of the radiation-curable precursor occurs in a non-inert environment).

§ 103 Rejections

Claims 1-10, 12-15, and 20 stand rejected under 35 USC § 103(a) as purportedly being unpatentable over McCormick et al. (US 5,856,022).

In addition to other elements, step (v) of the method of independent claim 1 requires the further polymerization of the radiation-curable precursor be performed in a non-inert atmosphere. Claim 1 has been amended to clarify that the radiation-curable precursor itself is in a non-inert atmosphere while being further polymerized by being subjected to actinic radiation. Referring to col. 24, lines 10-15 of McCormick et al., the Examiner stated "there is a teaching of completing the polymerization in a non-inert atmosphere as long as the film is bounded by two release liners." (Office Action dated April 2, 2009 at page 3.)

Prior to the present invention, it was well-known in the art, as described, e.g., by McCormick et al., that air (or more specifically, oxygen) inhibits or prevents radiation polymerization. For example, McCormick et al. note that polymerization can be quenched with air, where they define quench to mean "to inhibit any polymerization or further polymerization." (Col. 12, lines 6-10. See also col. 12, lines 48-54.) In fact, throughout the process steps of McCormick et al., significant efforts are undertaken to eliminate oxygen from the system prior to and during curing. (See, e.g., col. 12, lines 18-21; and col. 13, lines 12-19.)

McCormick et al., then discuss the state of the art for free radical polymerization as it existed prior to Applicants' invention, including the use of an inert atmosphere. According to McCormick et al., an inert atmosphere can be created using an inert gas such as nitrogen, carbon dioxide, helium, or argon. Alternatively, "A sufficiently inert atmosphere can be achieved by covering a layer of the photopolymerizable mixture with plastic film… ." (Col. 14, lines 3-10.) Thus, as taught by McCormick et al., and as was well-known in the art, further polymerization of a radiation-curable precursor should be performed in an inert atmosphere and this inert atmosphere can be provided either by creating an inert gas environment or by covering the precursor with a plastic film.

Contrary to this prior art belief and the teachings of McCormick et al., Applicants have discovered and claimed a process wherein the radiation curable precursor is polymerized by subjecting a precursor located in a non-inert environment to actinic radiation. For at least this

reason, the Patent Office has failed to show how McCormick et al., describe, teach or suggest all elements of the claimed invention.

In summary, the rejection of claims 1-10, 12-15, and 20 under 35 USC § 103(a) as being unpatentable over McCormick et al. (US 5,856,022) is unwarranted and should be withdrawn.

In view of the above, it is submitted that the application is in condition for allowance. Examination and reconsideration of the application is requested.

Respectfully submitted,

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